

AlumaCore OPGW

The AlumaCore Optical Ground Wire was AFL’s original OPGW design family dating back to 1984. OPGW provides all of the benefits of a traditional shield wire, such as providing short circuits a path to ground and protecting the circuits from lightning strikes, in addition to providing an optical pathway for communication.

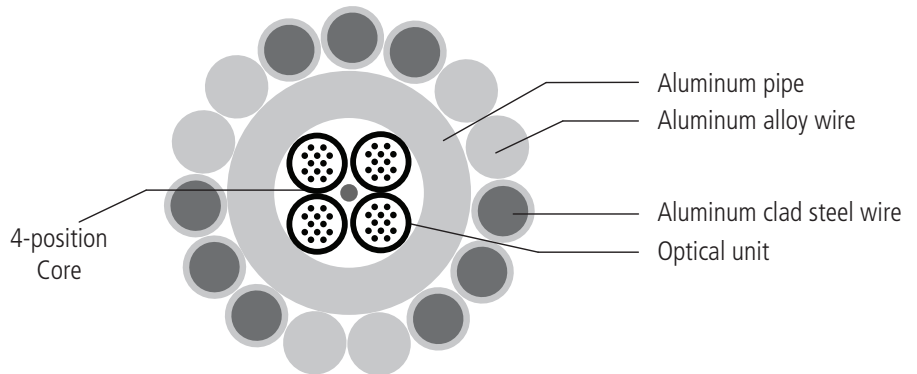
Features

- Fiber counts up to 216
- Fiber bearing units similar to that of other fiber optic cable such as ADSS and underground cable
- Splicer familiarity and less splicing prep time required
- Aluminum pipe provides high crush resistance and good electrical performance
- Ability to be sectionalized

Applications

- Energy Market
- Transmission
- Right-of-Way
- Topmost part of the structure (shield wire position)

Cable Components



Typical Designs

FIBERS (MAX)	OPGW SIZE	FAULT CURRENT (kA) ² sec	TOTAL CONDUCTOR AREA		OVERALL DIAMETER		APPROXIMATE WEIGHT		APPROXIMATE RBS		SAG10 CHART #	MAX SHIP LENGTH (PER REEL TYPE)	
			in ²	mm ²	in	mm	lbs/ft	kg/m	lbs	kgf		WOOD (m)	STEEL (m)
96	AC-64/528	68	0.1510	97.43	0.528	13.4	0.359	0.535	18,000	8,100	1-1450	6,580	7,000
96	AC-29/34/528	81	0.1510	97.43	0.528	13.4	0.281	0.418	12,000	5,440	1-1439	7,000	7,000
96	AC-74/552	81	0.1666	107.51	0.552	14.0	0.405	0.602	20,500	9,300	1-1453	5,820	7,000
96	AC-37/37/552	98	0.1666	107.51	0.552	14.0	0.306	0.455	13,000	6,000	1-1438	7,000	7,000
96	AC-71/571	95	0.1758	113.39	0.571	14.5	0.411	0.611	20,000	9,050	1-1461	5,780	7,000
96	AC-33/38/571	110	0.1758	113.39	0.571	14.5	0.323	0.478	13,250	6,000	1-1438	7,000	7,000
144	AC-86/646	151	0.2208	142.43	0.646	16.4	0.509	0.757	24,500	11,100	1-1461	4,640	6,600
144	AC-34/52/646	172	0.2208	142.43	0.646	16.4	0.417	0.621	17,250	7,800	1-1439	5,800	7,000
144	AC-129/724	239	0.2876	185.57	0.724	18.4	0.703	1.046	34,250	15,500	1-1453	3,360	4,700
144	AC-65/65/724	292	0.2876	185.57	0.724	18.4	0.530	0.789	21,900	9,900	1-1438	4,450	5,350

continued
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Typical Designs (cont.)

FIBERS (MAX)	OPGW SIZE	FAULT CURRENT (kA) ² sec	TOTAL CONDUCTOR AREA		OVERALL DIAMETER		APPROXIMATE WEIGHT		APPROXIMATE RBS		SAG10 CHART #	MAX SHIP LENGTH (PER REEL TYPE)	
			in ²	mm ²	in	mm	lbs/ft	kg/m	lbs	kgf		WOOD (m)	STEEL (m)
216	AC-88/659	154	0.2242	144.65	0.659	16.7	0.516	0.768	25,000	11,250	1-1461	4,400	6,300
216	AC-39/50/659	179	0.2242	144.65	0.659	16.7	0.427	0.636	17,000	7,750	1-1438	5,500	6,300
216	AC-109/699	196	0.2565	165.50	0.699	17.75	0.623	0.928	30,800	13,900	1-1457	3,700	6,300
216	AC-47/62/699	230	0.2565	165.50	0.699	17.75	0.499	0.742	21,200	9,600	1-1455	4,700	6,300
216	AC-125/726	230	0.2813	181.48	0.726	18.4	0.6949	1.034	34,250	15,500	1-1453	3,400	6,000
216	AC-58/67/726	277	0.2813	181.48	0.726	18.4	0.5418	0.806	22,500	10,250	1-1439	4,300	6,000

This information denotes the input data needed for Sag10™ (sag and tension calculation) software. WIR files of all these catalog designs can be found on PLS-CADD web page.

NOTES:

Data contained in the table are approximations. Please reference the exact cable data sheet for the most up-to-date information. The designs above are only a sampling of the options available from AFL. Contact customer service for a cable designed to your exact specifications.

Recommended Products for AlumaCore OPGW

DESCRIPTION	AFL NO.
Fiber Optic Cable Accessories	
OPGW Bolted Deadend	Refer to the Fiber Optic Cable Hardware catalog for specific AFL No.
OPGW Mechanical Suspension	Refer to the Fiber Optic Cable Hardware catalog for specific AFL No.
SBO1 Splice Enclosure	Refer to the Fiber Optic Cable Hardware catalog for specific AFL No.
Motion Control	
Stockbridge Vibration Damper	Refer to the Transmission & Distribution catalog, Motion Control section , for specific AFL No.

Temperature Specifications

TEMPERATURE RANGE	
Operation	-40°C to +85°C
Storage	-50°C to +85°C
Installation	-30°C to +85°C

Qualifications

GOVERNING BODY	STANDARD CODE	COMPONENT
IEEE	1138	Cable
IEC	60794-4	Cable
TIA	598-D	Fiber
ASTM	B415	Alumium Clad Steel Wire (ACS wire) Alumium Alloy Wire
	B398	

Contact AFL for your customized OPGW solution.

Fiber Optic Cable